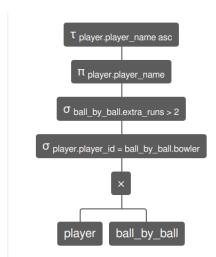
Devansh Jain, 190100044

13th Jan 2022

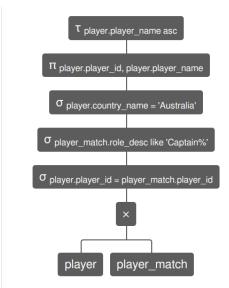
RA Queries

Query 2: Find the names of the bowlers in alphabetical order who have given more than 2 extra runs in a single delivery.



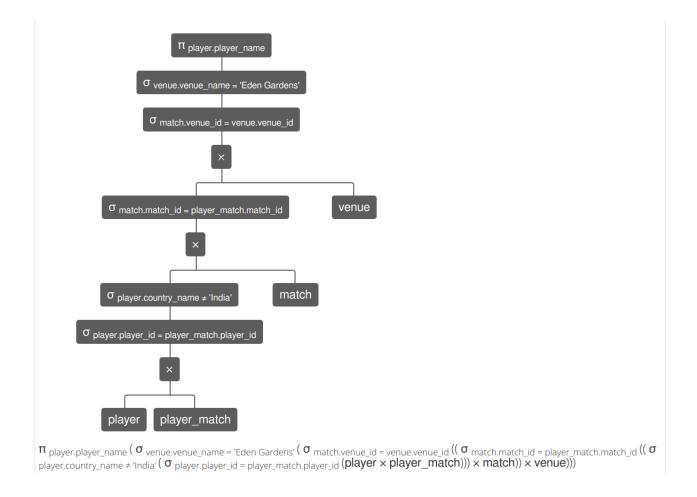
 $\tau_{player.player_name~asc} (\ \pi_{player.player_name} (\ \sigma_{ball_by_ball.extra_runs > 2} (\ \sigma_{player.player_id = ball_by_ball.bowler} (player \times ball_by_ball))))$

Query 4: Find player_id and names of Australian players who have captained a team and print in alphabetical order of their names.

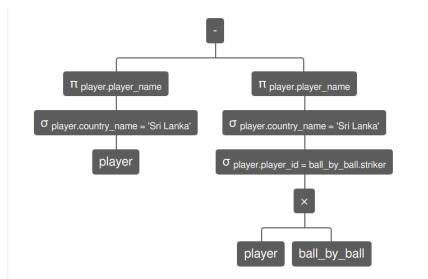


 $[\]tau_{player.player_name\ asc}\ (\ \pi_{player.player_id}, player.player_name}\ (\ \sigma_{player.country_name}\ =\ 'Australia'}\ (\ \sigma_{player_match.role_desc\ like\ 'Captain%'}\ (\ \sigma_{player_match.player_id}\ (player\times player_match)))))$

Query 8: Find names of overseas players who have played in Eden Gardens.

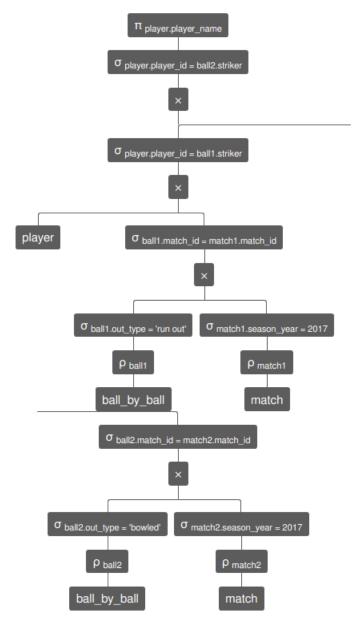


Query 12: Find names of players who have never batted from Srilanka.



($\pi_{player,player_name}$ ($\sigma_{player,country_name}$ = 'Sri Lanka' (player))) - ($\pi_{player,player_name}$ ($\sigma_{player,country_name}$ = 'Sri Lanka' ($\sigma_{player,player_name}$ ($\sigma_{player,country_name}$ = 'Sri Lanka' ($\sigma_{player,player_name}$ ($\sigma_{player,player_name}$))))

Query 14: Find the names of players who got dismissed by both "run out" and got bowled in 2 different matches in 2017.



 $\begin{array}{l} \pi_{player.player_name} \left(\ \sigma_{player.player_id} = \ ball2.striker \left(\left(\ \sigma_{player.player_id} = \ ball1.striker \left(\ player \times \left(\ \sigma_{ball1.match_id} = \ match1.match_id \left(\left(\ \sigma_{ball1.out_type} = \ run \ out' \left(\ \rho_{ball1} \left(\ ball_by_ball \right) \right) \times \left(\ \sigma_{match1.season_year} = 2017 \left(\ \rho_{match1} \left(\ match) \right) \right) \right) \right) \right) \times \left(\ \sigma_{ball2.match_id} = \ match2.match_id \left(\left(\ \sigma_{ball2.out_type} = \ bowled' \left(\ \rho_{ball2} \left(ball_by_ball \right) \right) \right) \times \left(\ \sigma_{match2.season_year} = 2017 \left(\ \rho_{match2.season_year} = 2017 \left(\ \rho_{match2.match_id} \left(\ \rho_{match2.match2.match_id} \left(\ \rho_{match2.match2.match_id} \left(\ \rho_{match2.$